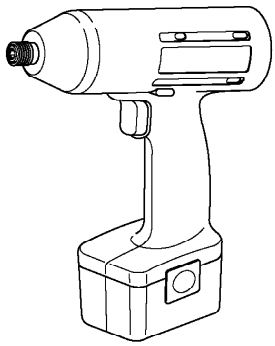
ORDER NO.PTD0409U42C1

F16

Service Manual

Cordless Impact Driver

EYF581-U1



SPECIFICATIONS

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MAIN UNIT

Motor	DC Motor 9.6V
No load speed	0-2,800/min (rpm)
Impact per minute	0-3,120 i.p.m.
Maximum torque	78.4 Nm (*Tightening time: 3 seconds) when screwed with a M12 High tensile bolt
Overall length	175 X 215 X Φ53 mm (6-59/61" X 8-15/32" X Φ2-3/32")
Weight (with battery pack EY9201)	1.21 kg

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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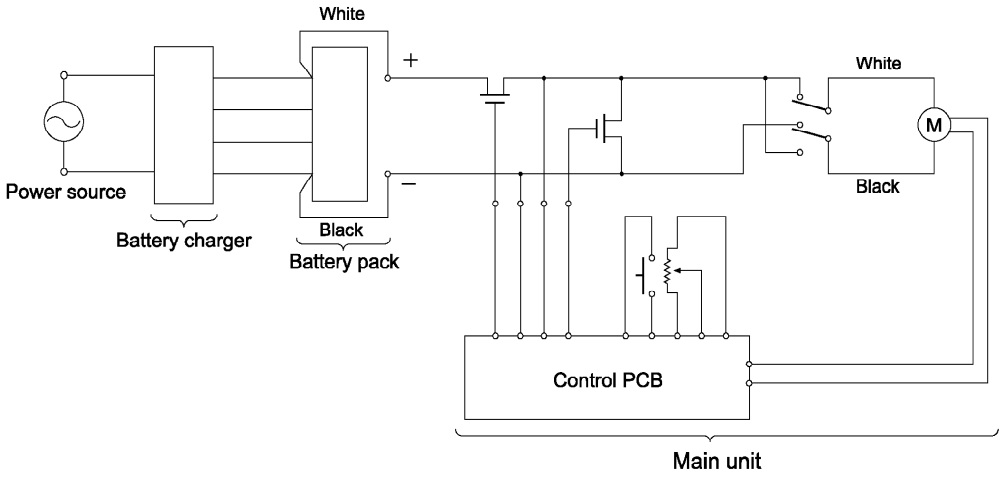
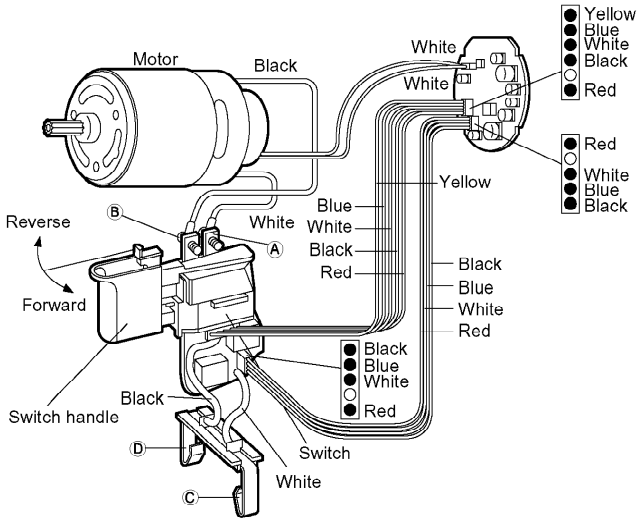
1. SCHEMATIC DIAGRAM



2. WIRING CONNECTION DIAGRAM



3. DISASSEMBLY/ASSEMBLY INSTRUCTIONS

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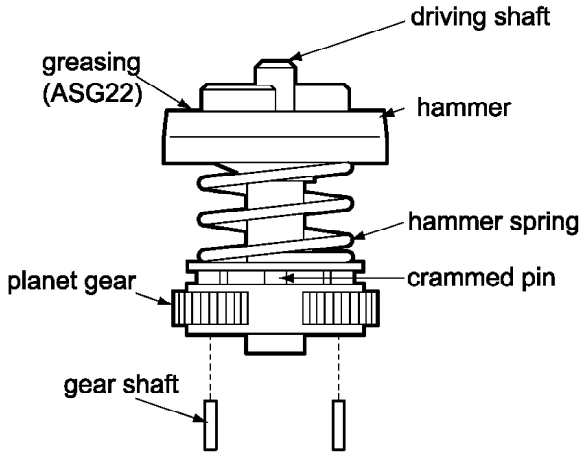
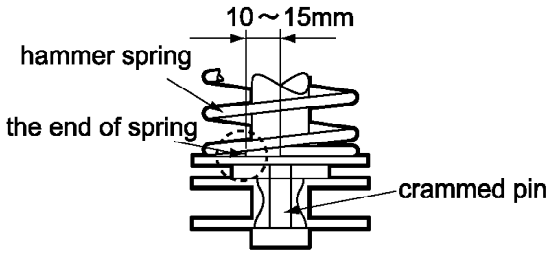
Ref. No. 1A	Procedure 1A	Removal of the Housing and disassembly driving block.
		1. Loosen 10 screws for housing. 2. Take out the driving block and remove 2 planet gears and the gear shafts by lightly it on the desk.

Ref. No. 1B	Procedure 1A → 1B	Placing position of the hammer spring.
		1. Rotate hammer spring and adjust the er spring to the position 10-15mm from cram

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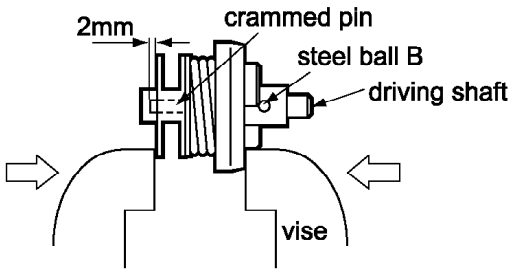
Ref. No. 1C	Procedure 1A → 1B → 1C	Disassembly of the driving block.
		1. Hold the driving block as shown with fi press it until pin comes out about 2mm. 2. Remove two steel ball B. 3. Then, the driving block is available to disassemble one by one. NOTE : Make sure 25 pieces of steel ball A come removing driving block.

3.1. NOTE IN ASSEMBLY

1. Assemble each parts in reverse order of disassembly method.
2. Grease to inside of hammer or around driving block area with ASG22 Showa Shell / WEY6811X5537.

4. TROUBLESHOOTING GUIDE

(Refer to WIRING CONNECTION DIAGRAM)

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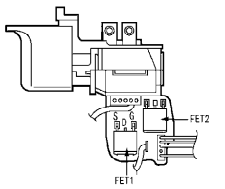
< TROUBLE >	< CHECK >		< REMEDY >
Does not operate.	<CHECK BATTERY PACK.> If no less than 9.6 V DC is available across the (+) and (-) terminals, the battery pack is OK. **Note**: The battery pack is sold separately as an optional accessory. See the nearest sales dealer for details. The battery pack has a limited life. The pack should be replaced if - after being charged for the rated charging time the battery voltage is less than 9.6V DC or the usable time is extremely short. - the battery leaks. Check battery for leaks and terminals for corrosion.	NO	Replace battery pack.
	OK		
	<CHECK TERMINAL CONNECTIONS BETWEEN MAIN UNIT AND BATTERY PACK.> Check for proper terminal contacts.	NO	Repair contacts.
	OK		
	<CHECK CONNECTION OF EACH CONNECTOR.> MOTOR: Lead wire from control PCB (2pcs) CONTROL PCB: Lead wire from switch (4pcs) SWITCH: Lead wire from control PCB (5pcs)	NO	Repair or re-insert connectors firmly.
	OK		
	<CHECK MOTOR.> The motor normally operates with its white (+) and black (-) lead wires connected to 9.6V DC. **NOTE**: No load rotation 16,000±1,600rpm.	NO	Replace motor.
	OK		
	<CHECK SWITCH BLOCK.> (See WIRING CONNECTION DIAGRAM.) Set to forward side and depress switch handle all the way. - There should be 0Ω between red – white lead wire.	NO	Replace switch & FET block.
	OK	NO	
	<CHECK FET CIRCUIT BLOCK.> Short-circuited (G: gate) and (S: source), and measure between it and (D: drain) without attaching motor block. * FET circuit block is weak against static electricity.	OK	Replace control circuit block.

	Volt-Ohm meter		Measurement Value
	(+)	(-)	
Terminal	(D)	(G)(S)	∞Ω
	(G)(S)	(D)	few resistance **

** The resistance value may be some differences depend on the measurement range.



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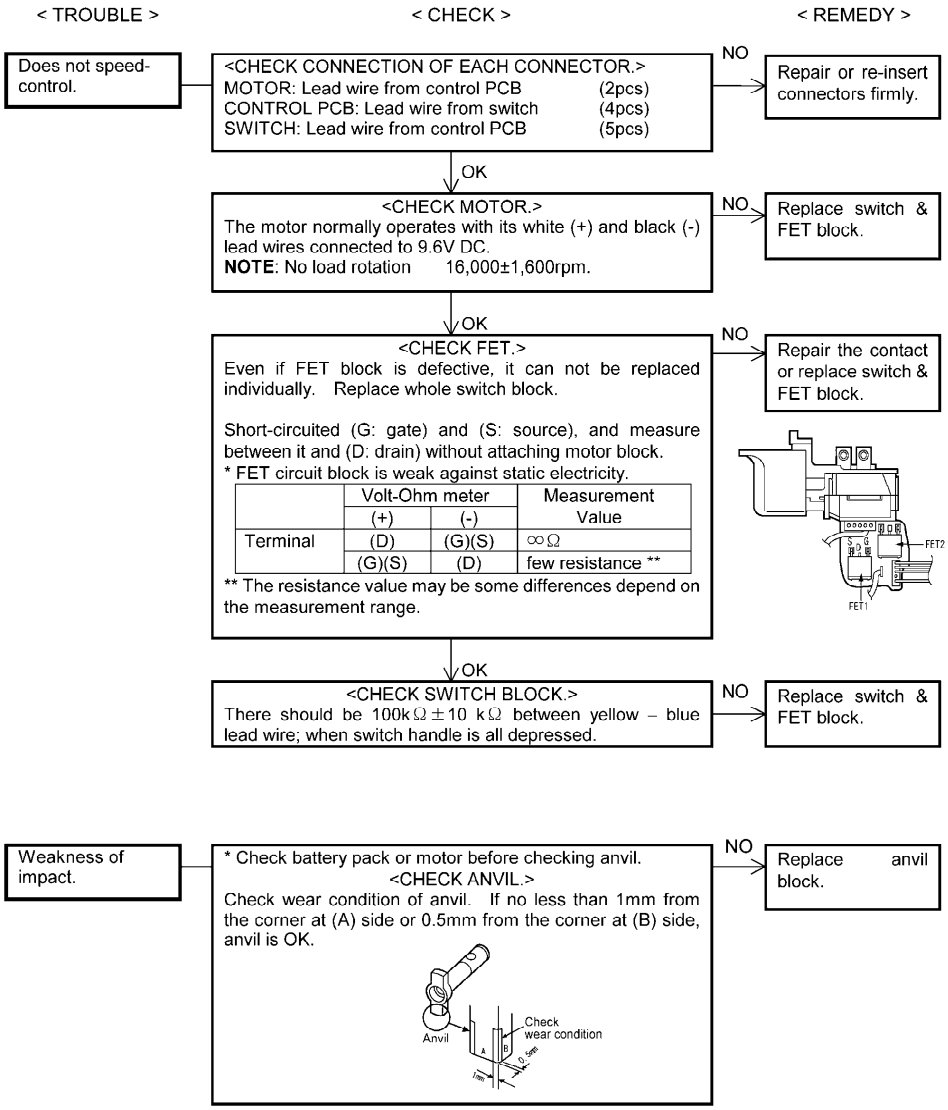
< TROUBLE >
< CHECK >
< REMEDY >
Does not speed-control.
<CHECK CONNECTION OF EACH CONNECTOR.>
MOTOR: Lead wire from control PCB (2pcs)
CONTROL PCB: Lead wire from switch (4pcs)
SWITCH: Lead wire from control PCB (5pcs)
NO
Repair or re-insert connectors firmly.
OK
<CHECK MOTOR.>
The motor normally operates with its white (+) and black (-) lead wires connected to 9.6V DC.
NOTE: No load rotation 16,000±1,600rpm.
NO
Replace switch & FET block.
OK
<CHECK FET.>
Even if FET block is defective, it can not be replaced individually. Replace whole switch block.
Short-circuited (G: gate) and (S: source), and measure between it and (D: drain) without attaching motor block.
* FET circuit block is weak against static electricity.
Volt-Ohm meter
(+)
(-)
Measurement Value
Terminal
(D)
(G)(S)
∞Ω
(G)(S)
(D)
few resistance **
** The resistance value may be some differences depend on the measurement range.
NO
Repair the contact or replace switch & FET block.
FET2
FET1
OK
<CHECK SWITCH BLOCK.>
There should be 100kΩ±10 kΩ between yellow – blue lead wire; when switch handle is all depressed.
NO
Replace switch & FET block.
Weakness of impact.
* Check battery pack or motor before checking anvil.
<CHECK ANVIL.>
Check wear condition of anvil. If no less than 1mm from the corner at (A) side or 0.5mm from the corner at (B) side, anvil is OK.
Anvil
Check wear condition
A
B
0.5mm
1mm
NO
Replace anvil block.

5. EXPLODED VIEW & REPLACEMENT PARTS LIST

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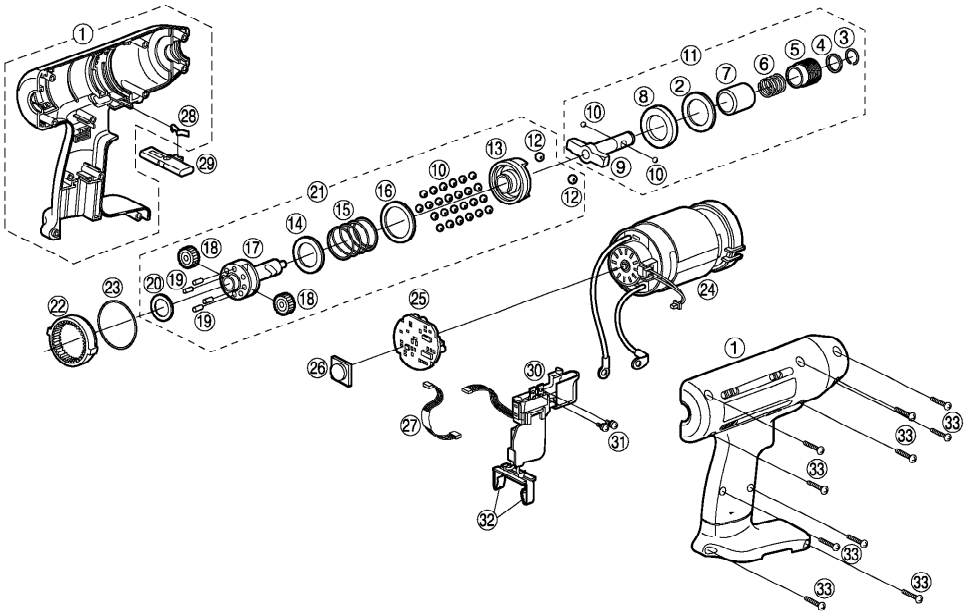

6. REPLACEMENT PARTS LIST

NOTE:
***B=only available as set**
***C=available individually**

Ref.No.	Part No.	Part Name & Description	Remarks			Per Unit
1	WEYF581K3078	HOUSING AB SET				1
2	WEY6605K0327	ANVIL CUSHION				1
3	WEY6605L1167	SPRING C FOR BIT				1
4	WEYF560L0858	THRUST PLATE C				1
5	WEYF560K3717	BIT HOLDER				1
6	WEYF560L0197	SPRING FOR BIT				1
7	WEYF560L0387	NEEDLE BEARING				1
8	WEYF560L0637	THRUST RING				1
9	WEYF560L1128	ANVIL				1
10	WEYF560L6977	STEEL BALL	*B	(28PCS/PK) Φ3		27
11	WEYF560L1108	ANVIL ASSEMBLY				1
12	WEY7201L6967	STEEL BALL	*B	(2PCS/PK)		2
13	WEYF581L1377	HAMMER				1
14	WEY7300L0877	THRUST PLATE				1
15	WEYF581L0157	SPRING FOR HAMMER				1
16	WEY574B0837	THRUST PLATE				1
17	WEYF560L1137	DRIVING SHAFT				1
18	WEYF560L1357	PLANET GEAR	*B	(2PCS/PK)		2
19	WEY6602K1347	GEAR SHAFT	*B	(2PCS/PK)		4
20	WEYF560L0857	THRUST PLATE				1
21	WEYF581L1067	DRIVING SHAFT BLOCK				1
22	WEYF581L1457	RING GEAR				1
23	WEYF581I0977	O-RING				1
24	WEYF581L1008	DC MOTOR				1

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Ref.No.	Part No.	Part Name & Description	Remarks			Per Unit
25	WEYF581L2137	CONTROL P.C.B.				1
26	WEYF560X3487	LENS				1
27	WEYF560L2078	LEAD WIRE W/CONNECTOR				1
28	WEY6481L0177	CLICK SPRING				1
29	WEYF560Y3247	F/R SELECTOR HANDLE				1
30	WEYF581Y2007	SWITCH				1
31	WEY6225L6027	SEMS SCREW	*C	K3-6		2
32	WEYF560L2127	BATTERY TERMINAL				1
33	WEYF560K9218	B TIGHT SCREW	*C	K3-16		10
-	WEYF581K8008	INDIVIDUAL BOX				1
-	WEYF581K8108	OPERATING INSTRUCTIONS				1

****Battery Pack is available as an optional accessory. See the nearest sales dealer for details.**
***** For replacement parts of charger, see the charger service manual. / Charger complete set is available as an optional accessory. See the nearest sales dealer for details.**

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